

## Abstract

The present invention provides, as for a method for analyzing the C-terminal amino acid sequence of a peptide by using a reaction for successively releasing the C-terminal amino acids of the peptide, which method can suppress, when successively releasing the C-terminal amino acids of a peptide of long amino acid length, such a undesirable side reaction as cleavage of peptide bond in the intermediate position of the peptide and can carry out the chemical treatment thereof under widely applicable conditions, a following method wherein a dry sample of a peptide with long amino acid length is beforehand subjected to an N-acylation treatment; by using a reaction reagent where an alkanolic acid anhydride is combined with a small amount of a perfluoroalkanoic acid, successive release of C-terminal amino acids is conducted under mild conditions; a hydrolysis treatment is applied; then, selective fragmentization at site of arginine residue is performed by digestion by trypsin; thereafter, decreases in molecular weight are measured for the C-terminal side fragments derived from a series of reaction products by analysis in negative mode of a MALDI-TOF-MS apparatus; thereby, the C-terminal amino acid sequence of the peptide sample is identified.